

REMARKS

Claims 10, 12, 14-17, and 19-34 are pending in the application. This Amendment amends claims 10, 12, 14-17, 19-21, 24-27 and 29 and adds claims 31-34.

Applicants thank Examiner Jacobson for the courtesies extended to Applicants' representative during the September 2, 2009, telephonic interview. During the interview, Applicants' representative discussed several differences between exemplary embodiments of the invention and the Cinello reference, including Cinello's lack of a bearing shell, and the plastic member and the container body being different materials.

The Office Action objected to the Amendment filed March 16, 2009, based on the assertion that it introduced new matter. Applicants respectfully submit that the material added by the March 16, 2009, Amendment was not new matter. However, in the interest of expediting prosecution and allowance, Paragraph [0016] and claims 14-16 are amended to cancel the material added by the March 16, 2009, Amendment. As a result, Applicants respectfully request that the objection be withdrawn.

The Office Action rejected claim 14-16 under 35 USC §112, first paragraph as failing to comply with the written description requirement. The rejection is respectfully traversed. However, in the interest of expediting prosecution and allowance, claims 14-16 are amended to cancel the material added by the March 16, 2009, Amendment. As a result, Applicants respectfully request that the rejection be withdrawn.

The Claimed Invention

An exemplary embodiment of the invention, as recited by, for example, independent claim 10, is directed to a plastic container for domestic washing machines which internally receives a rotary drum whose axes are mounted on bearings arranged in a bearing shell made of metallic material. A plastic member is accommodated on at least one section of a surface of the bearing shell, with the plastic member and the bearing

shell together forming a structural unit, before the remainder of the plastic container is injection-molded onto the structural unit formed by the bearing shell and the plastic member.

Another exemplary embodiment of the invention, as recited by, for example, independent claim 19, is directed to a container for a washing machine having a rotary drum disposed within the container and being mounted for rotation with respect to the container, the container being for retaining liquids during operation of the washing machine. The container includes a bearing shell for receiving at least one bearing, the bearing shell having a substantially cylindrical shape; a plastic member formed on the bearing shell; and a container body being formed on the plastic member.

Another exemplary embodiment of the invention, as recited by, for example, independent claim 25, is directed to a method for making a container for retaining liquids within a washing machine having a rotary drum mounted for rotation with respect to the container. The method includes providing a bearing shell for receiving at least one bearing, the bearing shell comprised of metallic material; forming a plastic member on the bearing shell by a first injection molding process, the plastic member and the bearing shell together forming an intermediate structure, the plastic member being a portion of the container; and then applying a container body formed on the intermediate structure by a second injection molding process.

Another exemplary embodiment of the invention, as recited by, for example, independent claim 29, is directed to a method for making a container for retaining liquids within a washing machine having a rotary drum mounted for rotation with respect to the container. The method includes providing a bearing shell for receiving at least one bearing, the bearing shell comprised of metallic material; applying a plastic member on the bearing shell via a first injection molding process, the plastic member and the bearing shell together forming an intermediate structure and the plastic member being a portion of a container; and after the plastic member applied on the bearing shell has at least

partially cured following the step of applying the plastic member, forming the remainder of the container on the intermediate structure with a second injection molding process.

Conventional washing machines can have a container having an interior that receives a rotary drum in which the washing load is placed. The rotary drum is attached in such a way that the axis of the rotary drum is mounted on metal bearings arranged on a bearing shell which is, in turn, arranged in a cavity of the container. In some conventional washing machines, the plastic container is formed by injection molding around a bearing shell arranged in the mold of the injection molding machine prior to injection molding the plastic container. Differences in the shrinkage coefficients, cooling curves, and masses of the plastic container material and the bearing shell material can cause several problems, including the formation of gaps between the plastic container and the bearing shell that can result in a weak joint between the container and the bearing shell and/or water penetrating the joint between the container and the bearing shell.

The present invention addresses and solves these problems by providing a plastic container for domestic washing machines including a plastic member accommodated on at least one section of a surface of a metallic bearing shell, the plastic member and the bearing shell together forming a structural unit, before the remainder of the plastic container is injection molded on the structural unit.

In an exemplary embodiment, the bearing shell is adapted to receive a bearing after the remainder of the plastic container is injection molded on the structural unit.

The Cinello Reference

The Office Action rejected claims 10, 12, 14, 16, 17, 19, 21-25, and 27-30 under 35 USC §103(a) as allegedly being obvious in view of EP 219115 to Cinello. Applicants respectfully traverse the rejection.

The applied reference does not teach or suggest the features of the claimed invention including 1) a bearing shell (claims 10, 19, 25 and 29); 2) a bearing shell made

of metallic material (claims 10, 23, 25 and 29); 3) a bearing shell for arranging bearings in the bearing shell (claim 10); 4) a bearing shell for receiving at least one bearing (claims 19, 25 and 29); 5) a bearing shell adapted to receive a bearing after a plastic part is formed on the bearing shell (claims 31-34); 6) a plastic member that covers a portion of an inside surface of a bearing shell (claim 14); 7) ribs formed on the plastic member that has another plastic piece injection molded onto it (claim 15); and 8) a bearing shell having a plastic ring surrounding a first section of an outside surface of the bearing shell, and a second portion of the outside surface of the bearing shell being contacted by a plastic container (claim 17). These features are important to reduce or eliminate the formation of gaps between the plastic container and the bearing shell that can result in a weak joint and/or water penetrating the joint between the container and the bearing shell.

The Office Action alleges that it would have been obvious to one having ordinary skill in the art to simplify the device disclosed by Cinello by injection molding a plastic member made of material capable of withstanding mechanical stresses directly onto a metal bearing shell. Applicants respectfully disagree with this allegation. In addition, Applicants respectfully disagree that such a device has the features of the claimed invention.

Regarding claims 10, 23, 25 and 29, Applicants respectfully submit that Cinello teaches away from using a metal member to position bearings in a washing machine. On page 1, lines 10-19, Cinello describes washing machines having either bearings maintained at axially space positions by a metal sleeve interposed between, or a metal sleeve formed with seats for bearings. On page 1, lines 20-36, Cinello describes problems associated with using such metal members. On page 1, line 37 – page 2, line 3, Cinello teaches away from using a metal member to position bearings in a washing machine by stating that

“It would now in fact be possible to eliminate the short-comings of these solutions and to achieve a durable mounting of the bearings in a tub if

such tub were completely made of a plastic material capable of sustaining the mechanical stresses acting on the bearings."

Cinello then goes on to describe how a tub can be made from plastic without any use of metal to position bearings.

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. (see, for example, *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), and M.P.E.P. §2142.02 VI). In light of the above, Applicants respectfully submit that it would not have been obvious based on the disclosure of Cinello to injection mold a plastic member onto a metal bearing shell because Cinello specifically teaches away from using a metal bearing shell by pointing out what Cinello believes to be problems with such a construction and disclosing devices and methods that do not use a metallic bearing shell.

Regarding claim 10, Applicants respectfully submit that Cinello does not teach or suggest a bearing shell in which bearings are arranged, a plastic member accommodated on a surface of the bearing shell, with the plastic member and the bearing shell together forming a structural unit, and a remainder of a plastic container being injection molded onto the structural unit. The spacer element 19 of Cinello cannot be considered a bearing shell as claimed in claim 10 because bearings are not arranged in spacer element 19.

Spacer element 19 simply maintains a predetermined space between bearings 12 and 13 while sleeve 14 is molded around bearings 12 and 13. Sleeve 14 cannot be considered a bearing shell as claimed in claim 10 because if sleeve 14 is considered the bearing shell as claimed in claim 10, Cinello does not teach or suggest a plastic member accommodated on a surface of the bearing shell, with the plastic member and the bearing shell together forming a structural unit and a remainder of a plastic container being injection molded onto the structural unit (only tub 5 is formed on sleeve 14).

Regarding claim 14, Applicants respectfully submit that Cinello does not teach or suggest a plastic member that covers a portion of an inside surface of a bearing shell.

Even if spacer element 19 could be considered a bearing shell, sleeve 14 does not cover a portion of an inside surface of spacer element 19.

Regarding claim 17, Applicants respectfully submit that Cinello does not teach or suggest a plastic member that is a ring which surrounds a first portion of an outside surface of the bearing shell, and a second portion of the outside surface of the bearing shell is contacted by the remainder of the plastic container. Even if spacer element 19 could be considered a bearing shell, sleeve 14 covers the entire outside surface of spacer element 19, leaving no portion of the outside surface of spacer element 19 to be contacted by tub 5.

Regarding claim 19, Applicants respectfully submit that Cinello does not teach or suggest a bearing shell for receiving at least one bearing, a plastic member formed on the bearing shell, and a container body formed on the plastic member. The spacer element 19 of Cinello cannot be considered a bearing shell as claimed in claim 19 because spacer element 19 does not receive at least one bearing. Spacer element 19 simply maintains a predetermined space between bearings 12 and 13 while sleeve 14 is molded around bearings 12 and 13. Sleeve 14 cannot be considered a bearing shell as claimed in claim 19 because if sleeve 14 is considered the bearing shell as claimed in claim 19, Cinello does not teach or suggest a plastic member formed on the bearing shell and a container body formed on the plastic member (only tub is formed on sleeve 14).

Regarding claim 25, Applicants respectfully submit that Cinello does not teach or suggest providing a bearing shell for receiving at least one bearing, forming a plastic member on the bearing shell, the plastic member and the bearing shell together forming an intermediate structure, and forming a container body on the intermediate structure. The spacer element 19 of Cinello cannot be considered a bearing shell as claimed in claim 25 because spacer element 19 is not for receiving at least one bearing. Spacer element 19 simply maintains a predetermined space between bearings 12 and 13 while sleeve 14 is molded around bearings 12 and 13. Sleeve 14 cannot be considered a bearing shell as claimed in claim 25 because if sleeve 14 is considered the bearing shell

as claimed in claim 25, Cinello does not teach or suggest forming a plastic member on the bearing shell, the plastic member and the bearing shell together forming an intermediate structure and forming a container body on the intermediate structure (only tub 5 is formed on sleeve 14).

Regarding claim 29, Applicants respectfully submit that Cinello does not teach or suggest providing a bearing shell for receiving at least one bearing, forming a plastic member on the bearing shell, the plastic member and the bearing shell together forming an intermediate structure, and forming the remainder of the container on the intermediate structure. The spacer element 19 of Cinello cannot be considered a bearing shell as claimed in claim 29 because spacer element 19 is not for receiving at least one bearing. Spacer element 19 simply maintains a predetermined space between bearings 12 and 13 while sleeve 14 is molded around bearings 12 and 13. Sleeve 14 cannot be considered a bearing shell as claimed in claim 29 because if sleeve 14 is considered the bearing shell as claimed in claim 29, Cinello does not teach or suggest forming a plastic member on the bearing shell, the plastic member and the bearing shell together forming an intermediate structure and forming the remainder of the container on the intermediate structure (only tub 5 is formed on sleeve 14).

Regarding claims 12, 21-24, 27 and 28, the Office Action asserts that utilizing the method of production taught by Cinello to eliminate the step of molding a spacer element for the bearings (a step central to the method of Cinello) would simplify the method recited by Cinello. And that this would result in the invention as claimed in claims 12, 21-24, 27 and 28. Applicants respectfully submit that it is not obvious to eliminate a central feature of an invention (in this case the molding of the spacer element). If it would have been obvious to eliminate the step of molding the spacer element, Cinello would have disclosed an embodiment without the spacer element. Further, Applicants submit that the invention in Cinello would not function without the spacer element.

Regarding claims 14, 16 and 17, the Office Action asserts that it would have been obvious to have selected the optimum configuration of the plastic member after taking particular factors into consideration. Applicants respectfully disagree with this assertion.

In view of the foregoing, Applicants respectfully submit that Cinello does not suggest the features of Claims 10, 12, 14, 16, 17, 19, 21-25, and 27-30 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, Applicants respectfully request withdrawal of this rejection.

The Cinello Reference in view of the Johnson Reference

The Office Action rejects claims 15, 20 and 26 under 35 USC §103(a) as allegedly being unpatentable over Cinello in view of US Patent No. 5,711,170 to Johnson. Applicants respectfully traverse the rejection.

As explained above, the Cinello reference does not teach or suggest, for example, the feature of a metallic bearing shell. The Johnson reference does not remedy the deficiencies of the Cinello reference.

Indeed, the Examiner does not allege that the Johnson reference teaches or suggests the feature of a metallic bearing shell as recited in independent claim 10.

As explained above, the Cinello reference does not teach or suggest, for example, the feature of a bearing shell for receiving at least one bearing. The Johnson reference does not remedy the deficiencies of the Cinello reference.

Indeed, the Examiner does not allege that the Johnson reference teaches or suggests the feature of a bearing shell for receiving at least one bearing as recited in independent claims 19 and 25.

In addition, Applicants respectfully submit that Johnson is not available to the Examiner for use in a rejection because Johnson is clearly non-analogous art. “[A] prior art reference must either be in the field of applicant’s endeavor or, if not, then be

reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*" (emphasis original, M.P.E.P. § 707.07(f). The Anderson reference is neither within the field of Applicants' endeavor nor reasonably pertinent to the particular problem with which the Applicant was concerned.

The field of applicant's endeavor is the injection molding in household washing appliances art. In contrast, the field of endeavor of Johnson is the household appliance cabinet art. One of ordinary skill in the art who is in the field of injection molding in household washing appliance art would not have looked to Johnson because Johnson is directed to simplifying cabinet construction. The Johnson reference is not within the field of Applicants' endeavor.

Johnson is also not reasonably pertinent to the particular problem with which the Applicant was concerned. As clearly explained by the specification at, for example, page 1, lines 12-20, the Applicants were concerned with the problem of the formation of cracks in injection molded washing machine containers. In contrast, Johnson is concerned with the completely different and unrelated problem of reducing costs and complexity in appliance cabinets (col. 1, lines 38-40). One of ordinary skill in the art who was concerned with the problem of the formation of cracks in injection molded washing machine containers as the Applicants were concerned would not have referred to Johnson because it is directed to the completely different and unrelated problem of reducing costs and complexity in appliance cabinets. Indeed, Johnson has absolutely nothing to do with the problem of the preventing the formation of cracks in injection molded washing machine containers. Thus, Johnson is not reasonably pertinent to the particular problem with which the Applicant was concerned.

Applicants respectfully submit that Johnson is neither within the field of Applicants' endeavor nor reasonably pertinent to the particular problem with which the Applicant was concerned and, as such, is non-analogous art and therefore, unavailable for use in rejecting the claims.

In addition, as stated in the Office Action, “Cinello [] is silent regarding the disposition of ribs on the plastic member formed prior to the injection molding of the rest of the tub.” The Office Action uses impermissible hindsight construction in combining the ridges or grooves mentioned, but not shown, in Johnson with the structure of Cinello to reject claims 15, 20 and 26.

“In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” (Emphasis original, M.P.E.P. 2141.02.I.)

“To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person. Knowledge of applicant’s disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the ‘differences,’ conduct the search and evaluate the ‘subject matter as a whole’ of the invention. The tendency to resort to ‘hindsight’ based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of facts gleaned from the prior art.” (Emphasis added, M.P.E.P. § 2142).

In the present instance, the Examiner has relied on the teachings of the present application to see the benefits associated with the plastic member being formed with a plurality of ribs (claim 15), and the plastic member including at least one projection extending into the container body to form an interlocking engagement with the container body (claims 20 and 26).

The Examiner clearly did not locate Johnson during a search for relevant art that was within the field of applicants’ endeavor or reasonably related to the particular

problem which the applicants were concerned. Rather than viewing the invention as a whole as required, the claim was dissected to focus only upon the ribs/projection and the Examiner resorted to the use of hindsight in an attempt to locate anything that was related to a rib or projection. This was done likely through a keyword search. Regardless of the difficulty of avoiding hindsight, it is clear that impermissible hindsight is the only explanation for locating the non-analogous art of the Johnson reference.

Johnson is directed to an integrated tub and cabinet structure for a laundry appliance. The tub in Johnson is integrally formed with the cabinet in two halves for ease of construction (see Fig. 3). Johnson does not deal with issues resulting from injection molding one part onto another part.

The office action asserts that it would have been obvious to one having ordinary skill in the art to have formed the plastic member made of mechanically resistant material disposed on the bearing shell to have ridges or grooves in order to provide a stronger connection between the plastic member and the remainder of the tub that would be injection molded from weaker material as claimed in claims 15, 20 and 26. Applicants respectfully disagree with this assertion. Johnson states that ridges or grooves may be provided in the rear wall 22 which mate with and interlock with complementary ridges or flanges on the rear surface of spinner support 88 (col. 3, lines 39- 42). Rear wall 22 is not injection molded onto spinner support 88 and spinner support 88 is not injection molded onto rear wall 22. The ridges and grooves mentioned in Johnson have nothing to do with ribs formed on a plastic member that is going to have another piece injection molded on to it. As a result, it would not have been obvious to combine the ridges or grooves of Johnson with the injection molded parts of Cinello for any reason.

In view of the foregoing, Applicants respectfully submit that the combination of Cinello and Johnson does not suggest the features of Claims 15, 20 and 26 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, Applicants respectfully request withdrawal of this rejection.

New Claims

New claims 31-34 include the feature of the bearing shell being adapted to receive the bearings after the remainder of the plastic container is injection molded. Neither Cinello nor Johnson teach or suggest this feature.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of Claims 10, 12, 14-17, and 19-34 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

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